

Study & Evaluation Scheme of

Bachelor of Technology in Computer Science & Engineering

[Applicable for Batch 2022-26]

[As per CBCS guidelines given by UGC]



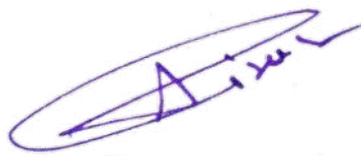
Approved in BOS	Approved in BOF	Approved in Academic Council
14-05-2022	08-08-2022	20-10-2022 Vide agenda No. 8.4.1

Quantum University, Roorkee

22 KM Milestone, Dehradun-Roorkee Highway, Roorkee (Uttarakhand)

Website: www.quantumuniversity.edu.in




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SEMESTER 3

Common

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3301	PC	Data Structure & Programming	4	0	0	4	1.0	Nil
EC3306	PC	Digital Electronics	3	0	0	3	1.0	Nil
CS3305	PC	Database Management System	3	0	0	3	1.0	Nil
CS3340	PC	Data Structure Programming Lab	0	0	2	1	1.0	Nil
EC3341	PC	Digital Electronics Lab	0	0	2	1	1.0	Nil
CS3342	PC	Oracle/SQL Server Lab	0	0	2	1	1.0	Nil
CS3346	P	Project Lab I	0	0	4	2	1.0	Nil
CS3371	FW	Internship Presentation	2	0	0	1	1.0	Nil
HU3202	FC	United Nations Development Programme	1	0	0	1	1.0	Nil
GP3301	GP	General Proficiency	0	0	0	1		
TOTAL			13	0	10	18		

CSE without Specialization

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3307	PC	Discrete Design Structure	2	2	0	4	1.0	Nil
CS3304	PC	Linux and Open Source	3	0	0	3	1.0	Nil
CS3343	PC	Linux and Open Source Lab	0	0	2	1	1.0	Nil
VP3301	VAP	Communication & Professional Skills - III	0	0	2	2	1.0	Nil
TOTAL			5	2	4	10		

Contact Hrs = 34

CSE-AIML Specialization

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3423	PE	Probabilistic Modelling and Reasoning with Python	4	0	0	3	1.0	Nil
CS3424	PE	R Programming for Data Science and Data Analysis	4	0	0	3	1.0	Nil
CS3307	PC	Discrete Design Structure	2	2	0	4	1.0	Nil
VP3301	VAP	Communication & Professional Skills -III	0	0	2	2	1.0	Nil
TOTAL			10	2	2	12		

SEMESTER 4

Common

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3403	PC	Object Oriented Programming and Systems with Java	3	0	0	3	1.0	Nil
CS3404	PC	Theory of Automata & Formal Language	3	1	0	4	1.0	Nil
---	OE	Open Elective I	3	0	0	3	1.0	Nil
CS3440	PC	Object Oriented Programming and Systems with Java Lab	0	0	2	1	1.0	Nil
CS3446	P	Project Lab II	0	0	4	2	1.0	Nil
GP3401	GP	General Proficiency	0	0	0	1		
		TOTAL	9	1	6	14		

All students are required to attend 04 to 06 weeks Industrial Training after 4th semester. Performance of this training will be evaluated and awarded in 5th semester.

CSE without Specialization

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3401	PC	Software Engineering	3	0	0	3	1.0	Nil
CS3402	PC	Computer Network	4	0	0	4	1.0	Nil
CS3442	PC	Computer Network Lab	0	0	2	1	1.0	Nil
CS3441	PC	Case Tools and Testing Lab	0	0	2	1	1.0	Nil
VP3401	VAP	Employability Skills-I(Numerical abilities)	0	0	2	2	1.0	Nil
		TOTAL	7	0	6	11		

Contact Hrs = 29




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SEMESTER 5

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3504	PC	Design and Analysis of Algorithm	3	2	0	4	1.0	CS3301
-	OE	Open Elective II	3	0	0	3	1.0	Nil
CS3541	PC	Design and Analysis of Algorithm Lab	0	0	2	1	1.0	Nil
CS3546	P	Project Lab III	0	0	4	2	1.0	Nil
CS3571	FW	Internship Presentation	2	0	0	2	1.0	Nil
GP3501	GP	General Proficiency	0	0	0	1		
TOTAL			8	2	6	13		

CSE without Specialization

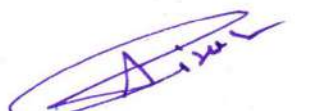
Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3505	PC	Foundation of Cloud Computing	3	0	0	3	1.0	Nil
CS3501	PC	Operating System	2	2	0	3	1.0	Nil
CS3502	PC	Web Technology	3	0	0	3	1.0	CS3403
CS3540	PC	Web Technology Lab	0	0	2	1	1.0	Nil
VP3501	VAP	Employability Skills -II (Aptitude & Reasoning)	2	0	0	2	1.0	Nil
TOTAL			10	2	2	12		

Contact Hours = 30

CSE-AIML Specialization

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3505	PC	Foundation of Cloud Computing	3	0	0	3	1.0	Nil
CS3623	PE	Neural Networks and Deep Learning (Vision and NLP)	4	0	0	3	1.0	Nil
CS3624	PE	Deep Learning Practical with Python, TensorFlow and Keras	3	0	0	2	1.0	Nil
CS3540	PC	Web Technology Lab	0	0	2	1	1.0	Nil
VP3501	VAP	Employability Skills -II (Aptitude & Reasoning)	2	0	0	2	1.0	Nil
TOTAL			12	0	2	11		




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SEMESTER 7

Common

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3701	PC	System Administration	4	0	0	4	1.0	Nil
-----	PE	Program Elective II	3	0	0	3	1.0	Nil
-----	PE	Program Elective III	3	0	0	3	1.0	Nil
CS3771	FW	Internship Presentation	2	0	0	2	1.0	Nil
CS3746	P	Project Lab V	0	0	4	2	1.0	Nil
CS3742	PC	Technical VAP II	0	0	2	2	1.0	Nil
GP3701	GP	General Proficiency	0	0	0	1		
		TOTAL	12	0	6	17		

CSE without Specialization

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3740	PC	System Administration Lab	0	0	2	1	1.0	Nil
CS3702	PC	Big Data and Business Intelligence	4	0	0	4	1.0	CS3301
		TOTAL	4	0	2	5		

Contact Hours = 24




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SEMESTER 7

Common

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3701	PC	System Administration	4	0	0	4	1.0	Nil
-----	PE	Program Elective II	3	0	0	3	1.0	Nil
-----	PE	Program Elective III	3	0	0	3	1.0	Nil
CS3771	FW	Internship Presentation	2	0	0	2	1.0	Nil
CS3746	P	Project Lab V	0	0	4	2	1.0	Nil
CS3742	PC	Technical VAP II	0	0	2	2	1.0	Nil
GP3701	GP	General Proficiency	0	0	0	1		
		TOTAL	12	0	6	17		

CSE without Specialization

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3740	PC	System Administration Lab	0	0	2	1	1.0	Nil
CS3702	PC	Big Data and Business Intelligence	4	0	0	4	1.0	CS3301
		TOTAL	4	0	2	5		

Contact Hours = 24




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SEMESTER 8

Common

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
	PE	Program Elective IV	3	0	0	3	1.0	Nil
	PE	Program Elective V	3	0	0	3	1.0	Nil
CS3870	FW	Project	0	0	0	4		
		TOTAL	6	0	0	10		
Contact Hrs:6								
OR								
It is the prerogative of the University to allow the students to opt for this option only after completing the process of approval before proceed on full semester internship on an industrial project. The evaluation of the internal component will be done jointly by industry supervisor and University supervisor. End semester evaluation will be done by a committee comprise of at least one expert from industry/corporate.								
Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
CS3871	FW	Major Industrial Project	0	0	0	10	1.0	Nil
		TOTAL	0	0	0	10		




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